

ABSTRACT

A hypobarically-controlled artificial limb for amputees includes a single socket with a volume and shape to receive a substantial portion of the residual limb. A liner with a volume less than the residual limb is donned over the residual limb, with the liner tensioned into a total contact relationship with the residual limb. A sealed cavity is formed between the socket and the liner. A vacuum source is connected to the socket cavity thereby drawing the residual limb and liner into firm and total contact with the socket. To compensate for some air leakage past the seal, there is a mechanism to maintain the vacuum in the cavity. A plate/socket attachment connects the vacuum source to the cavity.